

**AISHWARYA PANDEY**

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**Doctorate student: Water Sciences**



**Objective:**

To obtain a position that will allow me to utilize my technical skills and willingness to learn in making an organization successful.

**Highlights:**

- Currently holding three scholarships: Tuition fees exemption for foreign student in Institut National de la Recherche Scientifique, Québec City, Academic stipend and CREATE scholarship from FONCER-TEDGIEER, Canada.
- Comprehensive knowledge of Chromatographic systems and Spectroscopy.
- Knowledge of laboratory standards and best practices.
- Willingness to learn, team facilitator and hard working.
- Excellent at conceptual understanding.
- Winner at National level and State level paper and oral presentations.
- Various papers and book chapters' publications showcasing my excellent scientific writing skills.

**Academics:**

<b>Education</b>	<b>Passing Year</b>	<b>School/College</b>	<b>Affiliation</b>	<b>Percentage/CGPA</b>
PhD- Water Sciences	Ongoing	Institut National de la Recherche Scientifique (INRS)	Université du Québec	3.44/4 (Currently in VI session)
B.Tech+ M.Tech Biotechnology	2019	Amity Institute of Biotechnology, Jaipur	Amity University Rajasthan	9.1/10 CGPA
XII	2013	Carmel Convent School, Bhopal, Madhya Pradesh	Central Board of Secondary Education	72.2%
X	2011	Kendriya Vidyalaya Bolarum, Secunderabad, Telangana	Central Board of Secondary Education	9.4/10 CGPA

**Project profile(s):**

- 1. Institute** : Institut National de la Recherche Scientifique, Québec City, Canada  
**Project** : Production of environmental friendly bioplastics in a circular bioeconomic approach.  
**Guide** : Dr. Jean François Blais  
**Co-Guide** : Dr. Adjalle Kokou  
**Duration** : Sep., 2019 to Present  
**Role** : Working on the process development of producing environmental friendly bioplastics (preferably PHB) using waste substrates as carbon and nitrogen source for establishment of circular bioeconomy.
- 2. Institute** : Department of Zoology, Bareilly College, Bareilly, Uttar Pradesh  
**Project** : Application of Microbial Chelators for the Development of Selective and Efficient Chemosensors  
**Guide** : Dr. Rajendra Singh  
**Duration** : Jan 2019 to June, 2019  
**Role** : Development of a siderophore as chromium (III)-selective colorimetric sensor upon functionalization of it on gold nanoparticles and the establishment of an aluminium (III)-specific nanofluorosensor which is derived upon anchoring a siderophore on the surface of iron nanoparticles.
- 3. Institute** : Bioinnovations, Mumbai  
**Project** : Part-time Project Manager  
**Guide** : Dr. Kamlesh Patel  
**Duration** : Jan 2019 to April, 2019  
**Role** : Working of Rapid microbial identification using MALDI Biotyper, Mass Spectroscopy (Bruker) and Next generation sequencing (Illumina). Coordination with engineering and manufacturing teams in product development activities, recommendation of product enhancements and updates to identify new opportunities, support sales and marketing team for strategy development, conduct training for customers and employees and obtain customer feedback for suggesting them with appropriate product revisions.
- 4. Institute** : INTAS Pharmaceuticals, Biopharma division, Moraiya, Ahmedabad  
**Project** : PEGylation and purification of Recombinant proteins  
**Guide** : Dr. Yogendra V.V. Singh  
**Duration** : May 2018 to July 2018  
**Role** : PEGylated recombinant proteins and purified and concentrated it using Cation Exchange chromatography and tangential flow filtration.
- 5. Institute** : Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur  
**Project** : Conceptual novel approach for effective drug delivery system in nanomedicine.  
**Guide** : Dr. Vikram Yadav  
**Duration** : January 2018 to April 2018  
**Role** : Proposed nanotechnological approaches that promise to circumvent some of the problems related to nanomedicines, which may be well suited for its

- future applications.
6. **Institute** : Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur  
**Project** : Nanotech enhanced synbiotics: An approach to augment human health  
**Guide** : Dr. Vikram Yadav  
**Duration** : August 2017 to November 2017  
**Role** : Proposed methods for the amalgamation of synbiotics and nanomedicine for better supplements and treatment of various diseases.
  7. **Institute** : Central Salt and Marine Chemicals Research Institute, Council of Scientific and Industrial Research, Bhavnagar  
**Project** : Optical Sensing of Cyanide ions using silver nanoparticles  
**Guide** : Dr. Pabitra Baran Chhaterjee  
**Duration** : May 2017 to July 2017  
**Role** : Synthesized silver nanoparticles capable of detecting cyanide ions with naked eyes and confirmed using UV-vis and Fluorescence spectroscopy.
  8. **Institute** : Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur  
**Project** : Heavy metal content of foliar dust deposits of Jaipur  
**Guide** : Dr. Manishita Das Mukherjee  
**Duration** : August 2016 to December 2016  
**Role** : Investigated the Chromium content in foliar dust deposits at certain selected areas of Jaipur that showed the presence of this heavy metal in high traffic areas posing a threat on our health.
  9. **Institute** : Defence Institute of Physiology and Allied Sciences, Defence Research and Development Organisation, New Delhi  
**Project** : Isolation and Purification of Recombinant Protein of *Salmonella Typhi* (Insoluble fraction) as candidate vaccine molecule against *Salmonella* infection.  
**Guide** : Dr. Deepika Saraswat  
**Duration** : May 2016 to July 2016  
**Role** : Isolated, purified, estimated and quantified immunogenic proteins of *Salmonella Typhi* from recombinant *E.Coli* strains, as candidate vaccine molecule using various techniques of Molecular biology.

#### Technical Skills:

- **Techniques:** PEGylation, handling AKTA systems for chromatography, Tangential flow filtration, Sonication, SDS PAGE, Ni-NTA Affinity Chromatography, Dialysis, Bradford Assay Protein Estimation, ELISA, Western Blotting, UV Spectroscopy, fluorometry, Gel Doc, NMR, TEM, SEM, FT-IR, Powder XRD, HR-MS, Protein Crystallization and Protein Fingerprinting.
- **Software:** PyMol, Phylip, Origin, Chemdraw, Glide, Gromacs
- **Computer Languages known:** C, C++, Javascript JAVA, Data structure and Algorithm, Database Management System

#### Publication(s):

##### 1. Review Papers:

- Yadav, B., Pandey, A., Kumar, L. R., & Tyagi, R. D. (2020). Bioconversion of

waste (water)/residues to bioplastics-A circular bioeconomy approach. *Bioresource technology*, 298, 122584.

## 2. Journal articles:

- Aishwarya Pandey, Rasanpreet Kaur, Sunil Kumar, Sudarshan Singh Lakhawat, Vikram Kumar. (2020). Coronavirus Disease 2019 (COVID-19) Outbreak: A Pandemic and Public Health Emergency. *International Journal of Advanced Science and Technology*, 29(05), 12442-12449.
- Kumar, V., Pandey, A., Kumar, S., & Lakhawat, S. S. (July-September 2019). Conceptual Novel Approaches for Effective Drug Delivery System in Nanomedicines. *International Journal of Pharmaceutical Research*, 11(3).
- Pandey, Aishwarya, et al. "Nanoscience Enhanced Synbiotics-An Approach to Augment Human Health." *Int. J. Pharm. Technol. Biotechnol* 5.4 (2018): 01-11.

## 3. Book Chapters:

- Yadav, Bhoomika, et al. "Chapter 17 Polyhydroxyalkanoate Production from Feedstocks: Technological Advancements and Techno-Economic Analysis in Reference to Circular Bioeconomy." *Biomass, Biofuels, Biochemical: Circular Bioeconomy: Current Developments and Future Outlook*, 1st ed., Elsevier Science, 2021, pp. 475–507.
- Klai, Nouha, et al. "Chapter 18 Agro-Industrial Waste Valorization for Biopolymer Production and Life Cycle Assessment Toward Circular Bioeconomy." Yadav, Bhoomika, Et Al. "Chapter 17 Polyhydroxyalkanoate Production from Feedstocks: Technological Advancements and Techno-Economic Analysis in Reference to Circular Bioeconomy." *Biomass, Biofuels, Biochemical: Circular Bioeconomy: Current Developments and Future Outlook*, 1st Ed., Elsevier Science, 2021, Pp. 475–507. , 1st ed., Elsevier Sciences, 2021, pp. 515–547.
- Kumar, Lalit R., Bhoomika Yadav, Rajwinder Kaur, Sravan Kumar Yellapu, Sameer Pokhrel, Aishwarya Pandey, Bhagyashree Tiwari, and R. D. Tyagi. "Process engineering and commercialization of polyhydroxyalkanoates." In *Biomass, Biofuels, Biochemicals*, pp. 517-549. Elsevier, 2021.

## Workshops/Conferences:

1. Attended and orally presented in 3min. one slide on 'Green bio extraction of PHA using predator bacteria for an environmental friendly process' at 1st Virtual Eastern Canadian Symposium on Water Quality Research held virtually on November 6,2020.
2. Attended and orally presented on 'Horizontal Gene Transfer: The key to unlock the mystery of mixed microbiome involved in PHA synthesis' at 55th CENTRAL Canadian Symposium on Water Quality Research held in Ryerson University, Toronto on Feb. 20,2020.
3. Attended and presented a poster on 'Deciphering anti cancer drug resistance with precision through nanomedicines' at 12<sup>th</sup> Indo-African App sponsored International conference on trends, challenges and future scenario of pharmaceutical science-2018 held in Arya College of Pharmacy, Jaipur in 2018.
4. Attended and presented a poster on 'Deciphering anti cancer drug resistance with

precision through nanomedicines’ at 12<sup>th</sup> Indo-African App sponsored International conference on trends, challenges and future scenario of pharmaceutical science-2018 held in Arya College of Pharmacy, Jaipur in 2018.

5. Attended and presented a poster on ‘Nanotech enhanced synbiotics: An approach to augment human health’ at Rajasthan Science Congress held in Amity University Rajasthan in 2017.
6. Attended and presented a poster on ‘Urban solid waste management: A case study on Amity University Rajasthan’ at International conference on Emerging Technologies in Agricultural and Food Engineering by Indian Institute of Technology, Kharagpur in 2016.
7. Successfully completed 15days of E-learning Entrepreneurship Development Program conducted by National Institute of Entrepreneurship and Small Business Development, India at Amity University Rajasthan, Jaipur in 2016.
8. Attended and orally presented a paper on ‘Heavy metal content of foliar dust deposits of Jaipur’ at National Conference on Impact of Climate change on Air Quality, Biodiversity and Agriculture by Amity University Rajasthan in 2016.
9. Participated in International conference on Targeted Proteomics by Indian Institute of Technology, Mumbai in 2015.
10. Participated in National Conference on Geographical Indications-Application Filing and Awareness Program by Department of Science and Technology, Govt. of Rajasthan at Amity University Rajasthan, Jaipur in 2015.
11. Participated in C3W: Annual National Conference on Climate change and water at Suresh Gyan Vihar University, Jaipur in 2014.

### **Achievements:**

- First Aid & CPR/AED level C (Blended) Meets CSA Standard Z1210-17 – Intermediate
- Various articles, papers and book chapters have been published.
- Actively participated in a number of international, national and state level conferences.
- Winner at National level and State level paper and oral presentations.
- Successfully completed 15days of E-learning Entrepreneurship development program by National Institute of Entrepreneurship and Small Business Development, India in 2016.
- Won medals and prizes for various co-curricular activities in college during the fests.
- Won medals for Badminton and chess during Amity Sangathan in 2015 and 2016.
- Owns a purple belt after passing the 6<sup>th</sup> KYU in Karate.
- In possession of Appreciation letter from Shri Kapil Sibal (Then Human Resource Development Minister) for an excellent academic performance in secondary examinations in 2011.

### **Interests:**

- Numismatics
- Gardening
- Dancing
- Genealogy

### **Personal Information:**

Father's Name : Wg Cdr Aditya Prakash Pandey  
Mother's Name : Mrs. Kiran Pandey  
Date of Birth : 04 January 1996  
Marital Status : Unmarried  
Gender : Female  
Nationality : Indian  
Languages Known : English, Hindi, French (A1/A2)  
Permanent Add. : H.No.9, Ahinsa Vihar Colony, By Pass Road, Bhopal – 462041  
Current Work Add. : INRS-EET, 490 Rue de la Couronne, Quebec City, Quebec, Canada G1K9A9  
Mailing Add. : Apartment 305, 198, Rue Arago Est, Quebec City, Quebec G1K5R5

**Referees:**

**1. Dr. Pabitra Baran Chatterjee**

Assistant Professor, Central Salt and Marine Chemicals Research Institute, Council of Scientific and Industrial Research, Bhavnagar  
pbchatterjee@csmcri.res.in

**2. Dr. Vikram Yadav**

Assistant Professor, Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur  
vkumar3@jpr.amity.edu

**Declaration:**

I consider myself familiar with Biotechnology aspects. I am also confident of my ability to work in a team. I hereby declare that all the above information is true to the best of my knowledge.

**Date:** August 10, 2021

**Place:** Québec City



**(Aishwarya Pandey)**